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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/715,878	11/17/2000	Patrick Rivelli JR.	5877-0011.30	7631

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EXAMINER

HO, UYEN T

ART UNIT	PAPER NUMBER
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3731

DATE MAILED: 05/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/715,878

Applicant(s)

RIVELLI, PATRICK

Examiner

(Jackie) Tan-Uyen T. Ho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson (6,253,443).

In figure 2, Johnson discloses stent including:

- a plurality of expandable tubular members (20, 22, 26), each member composed of a continuous wire element forming a plurality of wave segments, each segment containing a pair of opposite looped peaks and having a wave shape such that:
 - in the stent in its expanded state, the distance between adjacent sides of a wave on proceeding from a peak toward opposite peaks, increases monotonically with an inflection point there between,

- in the stent's contracted state, the distance between adjacent sides of a wave would be minimum at a point intermediate opposite peaks,
 - axial connectors (24) joining confronting peaks of adjacent tubular members
 - and with all the configurations as described above, the stent in its expanded state is accommodated by movement of adjacent wave segment peaks away from one another without significant change in the axial dimension of the stent.
3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Cox (6,171,334).

In figures 4-6, Cox discloses stent including:

- a plurality of expandable tubular members, each member composed of a continuous wire element forming a plurality of wave segments, each segment containing a pair of opposite looped peaks and having a wave shape such that:
 - in the stent's expanded state, the distance between adjacent sides of a wave on proceeding from a peak toward opposite peaks, increases monotonically with an inflection point there between,
 - in the stent's contracted state, the distance between adjacent sides of a wave would be minimum at a point intermediate opposite peaks,

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- axial connectors (52) joining adjacent tubular members
- and with all the configurations as described above, the stent in its expanded state is accommodated by movement of adjacent wave segment peaks away from one another, without significant change in the axial dimension of the stent.

4. Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Brown et al. (6,348,065).

In figure 3, Brown et al. disclose stent including:

- a plurality of expandable tubular members (16), each member composed of a continuous wire element forming a plurality of wave segments, each segment containing a pair of opposite looped peaks and having a wave shape such that:
 - in the stent's expanded state, the distance between adjacent sides of a wave on proceeding from a peak toward opposite peaks, increases monotonically with an inflection point there between,
 - in the stent's contracted state, the distance between adjacent sides of a wave would be minimum at a point intermediate opposite peaks,
- axial connectors (20) joining confronting peaks of adjacent tubular members
- and with all the configurations as described above, the stent in its expanded state is accommodated by movement of adjacent wave

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segment peaks away from one another, without significant change in the axial dimension of the stent.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. '065 or Johnson '443 or Cox '334 in view of Schnepf-Pesch et al. '999. Brown et al., Johnson, Cox disclose stents as disclosed above. They fail to disclose their stents being formed of a NiTi shape memory alloy and have a stress-induced martensite phase at body temperature and an austenite phase transition temperature below body temperature. Schnepf-Pesch et al. disclose a stent being formed of a NiTi shape memory alloy and have a stress-induced martensite phase at body temperature and an austenite phase transition temperature below body temperature. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the Brown et al. or Johnson or Cox stent from the material that disclosed by Schnepf-Pesch et al wherein so doing would amount to mere substitution of one material for another within the same art that would perform equally well in the Brown et al. or Johnson or Cox stent.

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7. Claims 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination teaching of Brown et al. '065 or Johnson '443 or Cox '334 in view of Schnepf-Pesch et al. '999 in view of Parodi '764.

The structure and material of the stent, as claimed are disclosed in the combination teaching of Brown et al. or Johnson or Cox in view of Schnepf-Pesch et al. except for the size of inner lumen of the stent in its contracted and expanded states, as claimed.

The combination teaching of Brown et al. or Johnson or Cox in view of Schnepf-Pesch et al. fails to disclose a delivery system including a catheter having a pusher and the size of inner lumen of the catheter, as claimed. Parodi disclose a catheter and a pusher for delivering a stent into a vascular duct.

Although, the combination teaching of Brown et al. or Johnson or Cox in view of Schnepf-Pesch et al. and Parodi do not disclose the size as claimed of the inner diameter of the stent and the diameter of the lumen of the catheter, it is a well-known that the diameter of a human blood vessel can be 2-3 mm to about 8-mm.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a catheter in view of Parodi to deliver the stent of Brown et al. or Johnson or Cox into a treating vessel and make the stent and the catheter in such diameters as claimed, in order to accommodate the target vessel as small as 2-3 mm or as large as 8 mm in diameter.

Allowable Subject Matter

8. Claims 13-17 are allowed.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Jackie) Tan-Uyen T. Ho whose telephone number is (703) 306-3421. The examiner can normally be reached on MULTIFLEX Mon. to Sat..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Milano can be reached on (703) 308-2496. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3590 for regular communications and (703) 305-3590 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

(Jackie) Tan-Uyen T. Ho
May 15, 2002


MICHAEL J. MILANO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700